UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,724	12/05/2001	William P. Hann	062891.0569 (NUBU 4075)	5117

5073	7590	09/22/2004	EXAMINER

BAKER BOTTS L.L.P.
2001 ROSS AVENUE
SUITE 600
DALLAS, TX 75201-2980

HAN, CLEMENCE S

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

> A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
> THE MAILING DATE OF THIS COMMUNICATION.
> - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
>   after SIX (6) MONTHS from the mailing date of this communication.
> - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
> - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
> - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
>   Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
>   earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *7/20/04*.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-32* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-32* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a) ☐ All b) ☐ Some * c) ☐ None of:

       1. ☐ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____.

       3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   Responsive to amendment received on July 20, 2004, amended claims 1, 9,

12, 13, 16, 24 and 32 are entered as requested.

Information Disclosure Statement

2.   An initialed and dated copy of Applicant's IDS form 1449 had been attached

to the previous Office action. The applicant's new IDS form 1449 is a duplicate of

the previous IDS form 1449.

Claim Rejections - 35 USC § 103

3.   The text of those sections of Title 35, U.S. Code not included in this action

can be found in a prior Office action.

4.   Claim 1–5, 7, 8, 16-20, 22-28, 30 and 31 are rejected under 35 U.S.C. 103(a)

as being unpatentable over Munter (US Patent 5,475,679) in view of Linsley (US

Patent 5,583,894) and further in view of Riemann et al. (US Patent 5,892,764).

In regard to claim 1, 16 and 24, Munter teaches the communicating data

from a first channel 50 to a first serial-to-parallel converter 52 and communicating

data from a second channel 50 to a second serial-to-parallel converter 52. Munter

also teaches the converting the first and second sets of data to a parallel format

(Column 5 Line 13-14). Munter also teaches the writing data to memory banks 58.

Munter also teaches the scheduler 66, 70 reading cells out of the memory banks 58

to an output communication link 64. Munter, however, does not teach the steps of

monitoring the serial-to-parallel converters to determine when one or more words

of data sets have accumulated. Linsley teaches the steps of waiting for word

accumulation in serial-to-parallel converter 21 before writing data into the memory

25 (Column 7 Line 24-26). It would have been obvious to one skilled in the art to

modify Munter to have the steps of waiting for the word accumulation before

writing data into the memory as taught by Linsley in order to use the memory more

efficiently. Munter also does not teach the steps of monitoring the memory to

determine when enough of the words have formed cells. Riemann teaches the

steps of waiting for cell accumulation in the memory (Column 8 Line 64 – Column

9 Line 2). It would have been obvious to one skilled in the art to modify Munter to

have the steps of waiting for the cell accumulation before reading the data out to

network as taught by Riemann in order to use the network more efficiently.

In regard to claim 2, 17 and 25, Linsley teaches the steps of generating a

memory address (Column 4 Line 55-57).

In regard to claim 3, 18 and 26, Munter teaches the steps of receiving cells at

an ATM switch 16.

In regard to claim 4, 19 and 27, Munter teaches a scheduler 66, 70 coupled

to the memory 58 and a Utopia bus 64.

In regard to claim 5, 20 and 28, Munter teaches a controller 60 determining

the location of data storage in the memory 58 (Column 5 Line 37-38).

In regard to claim 7, 22 and 30, Munter teaches the steps of storing data in

the serial-to-parallel converters 52 into memory 58 via multiplexer 54 under

control of select controller 60 (Column 5 Line 14-19).

In regard to claim 8, 23 and 31, Linsley teaches the steps of incrementing the

memory address (Column 4 Line 57-58).

5.   Claim 6, 21 and 29 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Munter in view of Linsley and Riemann et al. and further in

view of Shimada (US 2003/0165147).

In regard to claim 6, 21 and 29, Munter in view of Linsley and Riemann

disclosed the steps of converting serial data to parallel data, storing the

accumulated words in the memory and reading out the accumulated cells from the

memory. Munter in view of Linsley and Riemann, however, does not teach the

steps of sending a write enable signal to the memory. Shimada teaches the steps of

sending a write enable signal to the memory [0056]. It would have been obvious

to one skilled in the art to include the steps of sending a write enable signal as

taught by Shimada to Munter in view of Linsley and Riemann in order to initiate

the data transfer to the memory.

6.   Claim 9, 11 and 13–15 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Munter in view of Riemann et al..

In regard to claim 9, Munter teaches the multiplexer 54 receiving packet data

from a first and second channel. Munter also teaches first and second memory

banks 58 coupled to the multiplexer. Munter also teaches the scheduler 66, 70

coupled to the memory banks and operable to monitor the first and second memory

banks and read out cells out of the memory banks (Column 5 Line 52-59). Munter,

however, does not teach the steps of monitoring the memory to determine whether

the first and second memory banks have accumulated enough words to form a cell.

Riemann teaches the steps of monitoring the memory to determine whether the

first and second memory banks have accumulated enough words to form a cell

(Column 8 Line 64 – Column 9 Line 2). It would have been obvious to one skilled

in the art to modify Munter to have the steps of waiting for the cell accumulation

before reading the data out to network as taught by Riemann in order to use the

network more efficiently.

In regard to claim 11, Munter teaches a controller 60 determining the

location of data storage in the memory 58 (Column 5 Line 37-38).

In regard to claim 13, Munter teaches a Utopia bus 64 coupled to scheduler 66, 70 and the ATM switch 16.

In regard to claim 14, Munter teaches a demultiplexer 76 coupled to the ATM switch.

In regard to claim 15, Munter teaches the dual-port memory 58 coupled to the multiplexer and the scheduler (Column 5 Line 28).

7.   Claim 10, 12 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Munter in view of Riemann et al. and further in view of Hoogenboom (US Patent 6,094,430).

In regard to claim 10, Munter teaches the multiplexer 54 receiving data from a first and second channel. Munter also teaches first and second memory banks 58 coupled to the multiplexer. Munter also teaches the scheduler 66, 70 coupled to the memory banks and operable to monitor the first and second memory banks and to read out cells out of the memory banks (Column 5 Line 52-59). Riemann teaches the steps of monitoring the memory to determine whether the first and second memory banks have accumulated enough words to form a cell (Column 8 Line 64 – Column 9 Line 2). Munter in view of Riemann, however, does not teach the write controllers operable to communicate words to the multiplexer. Hoogenboom teaches the write controller 360 operable to communicate words to

the multiplexer 371-374 (Column 3 Line 35-36). It would have been obvious to

one skilled in the art to include the write controller as taught by Hoogenboom to

Munter in view of Riemann in order to increase the control over memory

management.

In regard to claim 12, Hoogenboom teaches the write controller 360 coupled

to multiple serial-to-parallel converters 333-336 to receive data in parallel form

(Column 3 Line 29-30).

In regard to claim 32, Munter teaches the multiplexer 54 receiving data from

a first and second channel. Munter also teaches first and second memory banks 58

coupled to the multiplexer. Munter also teaches the scheduler 66, 70 coupled to

the memory banks and operable to monitor the first and second memory banks and

to read out cells out of the memory banks (Column 5 Line 52-59). Munter teaches

a controller 60 determining the location of data storage in the memory 58 (Column

5 Line 37-38). Munter, however, does not teach the steps of monitoring the

memory to determine whether the first and second memory banks have

accumulated enough words to form a cell. Riemann teaches the steps of

monitoring the memory to determine whether the first and second memory banks

have accumulated enough words to form a cell (Column 8 Line 64 – Column 9

Line 2). It would have been obvious to one skilled in the art to modify Munter to

have the steps of waiting for the cell accumulation before reading the data out to

network as taught by Riemann in order to use the network more efficiently.

Munter in view of Riemann, however, does not teach the write controllers to

receive parallel data from serial-to-parallel converters. Hoogenboom teaches the

write controller 360 coupled to multiple serial-to-parallel converters 333-336 to

receive data in parallel form (Column 3 Line 29-30). It would have been obvious

to one skilled in the art to include the write controller as taught by Hoogenboom to

Munter in view of Riemann in order to increase the control over memory

management.

Response to Arguments

8.   Applicant's arguments filed on July 20, 2004 have been fully considered but

they are not persuasive.

9.   In regard to claim 9, 11 and 13–15, the applicant argue that Munter fails to

teach determining whether enough words have been accumulated to form a cell

(Remark page 14). This newly added limitation is taught by Riemann (Column 8

Line 64 – Column 9 Line 2).

Therefore, the examiner withdraws 35 U.S.C. § 102(b) rejections as being

anticipated by Munter and presents 35 U.S.C. § 103(a) rejections as being

unpatentable over Munter in view of Riemann et al..

10.   In regard to claim 1–5, 7, 8, 16–20, 22–28, 30 and 31, the applicant argue

that Linsley fails to teach determining whether one or more words of a data set

have been accumulated (Remark page 15). Linsley teaches writing data into

memory when all the data for the word have been accumulated (Column 7 Line

24–27). The applicant further argues that Riemann does not teach providing for

the placement of the one or more words in a selected memory bank and reading of

one or more cells out of a selected memory bank (Remark page 15). Munter

teaches the writing data to memory banks 58. Munter also teaches the scheduler

66, 70 reading cells out of the memory banks 58 to an output communication link

64.

Therefore, the examiner contends that Munter in view of Linsley and

Riemann et al. teaches all the limitations of the claims.

11.   In regard to claim 6, 21 and 29, the applicant argue that since they depends

on independent claim 1, 16 and 24, respectively, they should be allowed by the

same argument presented for the independent claims (Remark page 15–16). The

argument has been already discussed in the previous section.

Therefore, the examiner contends that Munter in view of Linsley, Riemann

et al. and Shimada teaches all the limitations of the claims.

12.   In regard to claim 10 and 12, the applicant argue that since they depend on

independent claim 9, they should be allowed by the same argument presented for

the claim 9 (Remark page 16). The argument has been already discussed in the

previous section.

Therefore, the examiner withdraws 35 U.S.C. § 103(a) rejections of claim 32

as being unpatentable over Munter in view of Hoogenboom and presents 35

U.S.C. § 103(a) rejections as being unpatentable over Munter in view of Riemann

et al. and Hoogenboom.

13.   In regard to claim 32, the applicant argues that the independent claim 32

includes limitation similar to those of the claim 9 (Remark page 16). This newly

added limitation is taught by Riemann (Column 8 Line 64 – Column 9 Line 2).

Therefore, the examiner withdraws 35 U.S.C. § 103(a) rejections of claim 32

as being unpatentable over Munter in view of Hoogenboom and presents 35

U.S.C. § 103(a) rejections as being unpatentable over Munter in view of Riemann

et al. and Hoogenboom.

Conclusion

14.   Applicant's amendment necessitated the new ground(s) of rejection

presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.**

See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.
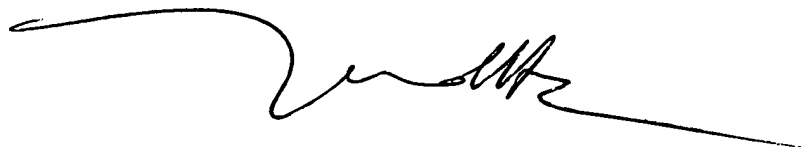
15.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clemence Han whose telephone number is (571) 272-3158. The examiner can normally be reached on Monday-Thursday 7 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR

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direct.uspto.gov. Should you have questions on access to the Private PAIR system,

contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Clemence Han
Examiner
Art Unit 2665

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600